WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

discrete wavelet transform means for performing discrete wavelet transform on respective plural components constructing image data;

coefficient coding means for encoding coefficients of subbands generated by said discrete wavelet transform means; and

code data generation means for generating code data, with respect to the respective plural components, by arraying respective code data in a predetermined ratio.

2. An image processing apparatus comprising:

discrete wavelet transform means for performing discrete wavelet transform on respective plural components constructing image data;

coefficient coding means for encoding coefficients of subbands generated by said discrete wavelet transform means; and

code data generation means for generating code data by arraying respective code data of said plural components in subband units,

wherein said discrete wavelet transform means decomposes said plural components into different numbers of subbands for at least two components, and wherein

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said code data generation means generates the code data by arraying the code data of said plural components in subband units.

5   3. The image processing apparatus according to claim 2, wherein said at least two components constructing said image data are a luminance component and chrominance components.

10   4. The image processing apparatus according to claim 2, wherein said code data generation means sequentially arrays said code data from a low frequency subband.

5. An image processing method comprising:
15   a discrete wavelet transform step of performing discrete wavelet transform on respective plural components constructing image data;
        a coefficient coding step of encoding coefficients of subbands generated in said discrete wavelet transform
20   step; and
         a code data generation step of generating code data, with respect to the respective plural components, by arraying respective code data in a predetermined ratio.

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6. An image processing method comprising:

a discrete wavelet transform step of performing discrete wavelet transform on respective plural components constructing image data;

a coefficient coding step of encoding coefficients of subbands generated at said discrete wavelet transform step; and

a code data generation step of generating code data by arraying respective code data of said plural components in subband units,

wherein at said discrete wavelet transform step, said plural components are decomposed into different numbers of subbands for at least two components, and wherein at said code data generation step, the code data is generated by arraying the code data of said plural components in subband units.

7. The image processing method according to claim 6, wherein said plural components constructing image data include a luminance component and chrominance components.

8. The image processing method according to claim 6, wherein at said code data generation step, said code data is sequentially arrayed from a low frequency subband.

9. An image processing apparatus comprising:

discrete wavelet transform means for performing
discrete wavelet transform on respective plural
components constructing image data;

coefficient coding means for encoding coefficients
of subbands generated by said discrete wavelet transform
means; and

code data generation means for generating code
data by arraying code data corresponding to said
respective plural components encoded by said coefficient
coding means,

wherein said discrete wavelet transform means
decomposes said respective plural components into
different numbers of subbands for at least two
components, and wherein said code data generation means
generates the code data by arraying a part or whole of
code data of subbands at the same level among the code
data corresponding to said respective plural components.

10. The image processing apparatus according to claim 9,
wherein said plural components constructing said image
data includes a luminance component and a chrominance
component, and the number of applications of discrete
wavelet transform by said discrete wavelet transform
means for said chrominance components is larger than
that for said luminance component.

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11. An image processing method comprising:

a discrete wavelet transform step of performing discrete wavelet transform on respective plural components constructing image data;

a coefficient coding step of encoding coefficients of subbands generated at said discrete wavelet transform step; and

a code data generation step of generating code data by arraying code data corresponding to said respective plural components encoded at said coefficient coding step,

wherein at said discrete wavelet transform step, said respective plural components are decomposed into different numbers of subbands for at least two components, and wherein at said code data generation step, the code data is generated by arraying a part or whole of code data of subbands at the same level among the code data corresponding to said respective plural components.

12. The image processing method according to claim 11, wherein said plural components constructing said image data includes a luminance component and a chrominance component, and the number of applications of discrete wavelet transform at said discrete wavelet transform

step for said chrominance components is larger than that
for said luminance component.

13. A computer-readable storage medium containing a
program for execution of image processing method, said
program comprising:

a discrete wavelet transform module of performing
discrete wavelet transform on respective plural
components constructing image data;

a coefficient coding module of encoding
coefficients of subbands generated in said discrete
wavelet transform module; and

a code data generation module of generating code
data by arraying respective code data in a predetermined
ratio.

14. A computer-readable storage medium containing a
program for execution of image processing method, said
program comprising:

a discrete wavelet transform module of performing
discrete wavelet transform on respective plural
components constructing image data;

a coefficient coding module of encoding
coefficients of subbands generated in said discrete
wavelet transform module; and

a code data generation module of generating code data by arraying respective code data of said plural components subband units,

wherein in said discrete wavelet transform module, said plural components are decomposed into different numbers of subbands for at least two components, and wherein in said code data generation module, the code data is generated by arraying the code data of said plural components in subband units.

15. A computer-readable storage medium containing a program for execution of image processing method, said program comprising:

a discrete wavelet transform module of performing discrete wavelet transform on respective plural components constructing image data;

a coefficient coding module of encoding coefficients of subbands generated in said discrete wavelet transform module; and

a code data generation module of generating code data by arraying code data corresponding to said respective plural components encoded in said coefficient coding module,

wherein in said discrete wavelet transform module, said respective plural components are decomposed into different numbers of subbands for at least two

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components, and wherein in said code data generation module, the code data is generated by arraying a part or whole of code data of subbands at the same level among the code data corresponding to said respective plural

5   components.